

Name: _____

pa1106: Factoring with box when $a = \text{prime}$ (v10)

Example

Use the box to factor $2x^2 - 9x - 18$.

Guess and check, based on factor pairs of -18 , until you find the pair that results in a linear coefficient of -9 after combining like terms.

*	x	-6
2x	$2x^2$	$-12x$
3	3x	-18

$2x^2 - 12x + 3x - 18$

Combine like terms.

$2x^2 - 9x - 18$

ANSWER: $(2x + 3)(x - 6)$

Question 1

Use the box to factor $7x^2 + 33x + 20$.

*	x	4
7x	$7x^2$	$28x$
5	5x	20

ANSWER: $(7x + 5)(x + 4)$

Question 2

Use the box to factor $3x^2 - x - 24$.

*	x	-3
3x	$3x^2$	-9x
8	8x	-24

ANSWER: $(3x + 8)(x - 3)$

Question 3

Use the box to factor $5x^2 - 23x + 24$.

*	x	-3
5x	$5x^2$	-15x
-8	-8x	24

ANSWER: $(5x - 8)(x - 3)$